Amendments to the Claims

1. (Currently amended) A method for depositing a deposition material on a part comprising:

placing the part in a deposition chamber;

applying a first electric potential to the part;

evaporating one or more first components for forming the deposition material;

ionizing the evaporated first components, the first electric potential drawing the ionized first components toward the part; and

sputtering one or more second components for forming the deposition material, ions of the one or more first components being used to sputter the one or more second components, the sputtered second components being codeposited with the ionized first components, the sputtering comprising applying a sputtering voltage to a sputtering target, the sputtering target encircling an ion flowpath from a source of the first components to the part.

2. (Original) The method of claim 1 wherein:

the sputtering comprises applying a sputtering voltage to a sputtering target.

3. (Original) The method of claim 2 wherein:

the sputtering target encircles an ion flowpath from a source of the first components to the part.

4. (Original) The method of claim 1 wherein:

the one or more second components comprise one or more refractory elements.

5. (Original) The method of claim 1 wherein:

the one or more second components consist essentially of Mo.

6. (Original) The method of claim 1 wherein:

the deposition material consists essentially of at least one of Ti-6Al-2Sn-4Zr-2Mo, Ti-8Al-1V-1Mo, or Ti-6Al-2Sn-4Zr-6Mo.

7. (Previously presented) The method of claim 1 wherein:

the part has lost first material from a site prior to the placing; and

the deposition material is deposited to the site so as to restore the part.

8. (Previously presented) The method of claim 7 wherein:

the deposition material has a first interface with a substrate of the part, a bond strength between the deposition material and the substrate being in excess of 50ksi (50,000 psi).

9. (Previously presented) The method of claim 8 wherein:

the part and the deposition material comprise Ti alloys or nickel- or cobalt-based superalloys of like nominal composition;

the bond strength is between 100ksi (100,000 psi) and 200ksi (200,000 psi);

the deposition material has a depth of at least 2.0mm;

the substrate has a thickness in excess of the depth of the deposition material; and

the substrate comprises original unrepaired material.

10. (Original) The method of claim 1 wherein:

the part is a Ti alloy turbine engine part and the deposition material is Ti-based.

11. (Canceled)

12. (Canceled)

13. (Canceled)

14. (Currently amended) An apparatus for depositing deposition material on a workpiece comprising:

a deposition chamber;

a workpiece in the deposition chamber and subject to a first non-zero bias voltage;

a first source of one or more first components of the deposition material heated so as to vaporize the first components; and

<u>one or more sputtering targets encircling an ion flowpath from the first source to the workpiece and including:</u>

a first sputtering target in the deposition chamber comprising one or more second components of the deposition material and subject to a second bias voltage so that ions of the first components sputter the second components.

15. (Original) The apparatus of claim 14 wherein:
the one or more first components include Ti, Al, and V; and
the one or more second components consist essentially of Mo.

16. (Original) The apparatus of claim 14 wherein:
first bias voltage is different from the second bias voltage.

17. (Original) The apparatus of claim 14 wherein:
first and second bias voltages are pulse modulated voltages differing in at least one of magnitude and duty cycle.

18. (Original) The apparatus of claim 14, the one or more sputtering targets further comprising:
a second sputtering target, differing in composition from the first sputtering target, and subject to a third non-zero bias voltage, different from the second bias voltage.

19. (Currently amended) A method for codepositing a deposition material of one or more first components and one or more second components depositing comprising:
ion-enhanced electron beam physical vapor deposition of the one or more first components; and
sputtering of the one or more second components, ions of the first components being used to sputter the second components, the sputtering comprising applying a sputtering voltage to a sputtering target, the sputtering target encircling an ion flowpath from a source of the first components to the part.

20. (Original) The method of claim 19 wherein:
the one or more first components are from a single ingot; and
the one or more second components are at least two components from at least two

different sputtering targets of different composition.

21. (Previously presented) The apparatus of claim 14 wherein:

a sputter target sleeve comprising at least said first sputtering target has an inboard surface facing downstream toward the workpiece along a flowpath of the first components and a second surface facing upstream and away from the flowpath.

22. (Previously presented) The apparatus of claim 21 wherein:

a shield is positioned adjacent the second surface to protect the second surface from ions emitted from a plasma associated with the vaporized first components.

23. (Previously presented) The apparatus of claim 21 wherein:

the sputter target sleeve comprises a second sputtering target, different in composition from the first sputtering target, the first and second sputtering targets being associated segments of the sleeve.

24. (Canceled)

25. (Canceled)

26. (Previously presented) The method of claim 1 wherein:

said ions of the one or more first components are titanium ions.

27. (Previously presented) The method of claim 1 wherein:

the sputtering is performed at a chamber pressure of less than 0.01Pa.

28. (New) The method of claim 19 wherein:

the sputtering is performed at a chamber pressure of less than 0.01Pa.